We claim:

1.   A method for increasing screen space of a computing device using semi-transparent functional control areas on the screen comprising the steps of:

   determining the size of control images for display on the screen;

5   determining the overall display area of the screen of the computing device; and

   displaying control images on the screen of the computing device in a semitransparent state such that screen content remains visible and such that no images share any of the same space on the screen.

10   2.   The method as described in claim 1 further comprising before said displaying step, the step of determining the maximum number of control images that can be displayed in the overall area of the screen such that no images have any overlap on the screen.

15   3.   The method as described in claim 2 further comprising after said maximum control image determining step, the steps of:

   in response to a user request, retrieving an application program;

   determining the number of control images for display from retrieved program; and

20   when the number is control is less that the maximum number of images that can be displayed on that screen, displaying the control images for that program.

4.   The method as described in claim 2 further comprising after said maximum control image determining step, the steps of:

25   in response to a user request, retrieving an application program;

   determining the number of control images for display from retrieved program;

   when the determination is that the number of control images for display is greater than the maximum number of control images for that screen, ranking the control images for that program; and

30   displaying the control images in an order according to the rank of the control images.

5.   The method as described in claim 4 wherein said displaying step further comprises the steps of:

        displaying a control image on the screen;

        incrementing a control image display number count;

5   comparing the display count with the maximum number of control images for that screen; and

        displaying the next control image on the screen when the display count is less than the maximum number of control images for that screen.

10   6.   The method as described in claim 4 wherein said displaying step further comprises the steps of:

        displaying a control image on the screen;

        incrementing a control image display number count;

        comparing the display count with the maximum number of control images for that

15   screen; and

        terminating the method when the display count is equal to the maximum number of control images for that screen.

        7.   The method as described in claim 4 wherein the ranking process by prioritizing

20   the control images according to the frequency of use of the control image.

        8.   A computer program product in a computer readable medium for increasing screen space of a computing device using semi-transparent functional control areas on the screen comprising:

25   instructions for determining the size of control images for display on the screen;

        instructions for determining the overall display area of the screen of the computing device; and

        instructions for displaying control images on the screen of the computing device in a semitransparent state such that screen content remains visible and such that no

30   images share any of the same space on the screen.

9.   The computer program product as described in claim 8 further comprising before said displaying instructions, instructions for determining the maximum number of control images that can be displayed in the overall area of the screen such that no images have any overlap on the screen.

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10.   The computer program product as described in claim 9 further comprising after said maximum control image instructions:

in response to a user request, instructions for retrieving an application program;

instructions for determining the number of control images for display from

10   retrieved program; and

when the number is control is less that the maximum number of images that can be displayed on that screen, instructions for displaying the control images for that program.

15   11.   The computer program product as described in claim 9 further comprising after said maximum control image determining instructions:

in response to a user request, instructions for retrieving an application program;

instructions for determining the number of control images for display from retrieved program;

20   when the determination is that the number of control images for display is greater than the maximum number of control images for that screen, instructions for ranking the control images for that program; and

instructions for displaying the control images in an order according to the determined rank of the control images.

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12.   The computer program product as described in claim 11 wherein said displaying instructions for further comprise:

   instructions for displaying a control image on the screen;

   instructions for incrementing a control image display number count;

5   instructions for comparing the display count with the maximum number of control images for that screen; and

   instructions for displaying the next control image on the screen when the display count is less than the maximum number of control images for that screen.

10   13.   The computer program product as described in claim 11 wherein said displaying instructions further comprise:

   instructions for displaying a control image on the screen;

   instructions for incrementing a control image display number count;

   instructions for comparing the display count with the maximum number of control

15 images for that screen; and

   instructions for terminating the method when the display count is equal to the maximum number of control images for that screen.

14.   A computing device using semi-transparent functional control areas on the screen

20 comprising:

   a processing unit incorporated within the computing device;

   a screen for displaying information to the user of the computing device, said screen comprising a content layer and a control layer, said control layer further comprising non-overlapping semi-transparent functional control areas on the screen; and

25   control software for implementation of control functions corresponding to the semi-transparent control areas.

15.   The computing device as described in claim 14 wherein said control layer overlays said content layer on said screen.

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16. The computing device as described in claim 14 wherein the control areas and said control software comprise a user interface for the computing device.

17. The computing device as described in claim 16 wherein said screen is a touch

5   control screen.

18. The computing device as described in claim 14 further comprising control buttons not positioned on the device screen.

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